UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/656,364	09/06/2000	Alice C. Martino	6107.N CN2	3730

7590 08/27/2002

Pharmacia & Upjohn Company
Global Intellectual Property
301 Henrietta Street
Kalamazoo, MI 49001

EXAMINER	
SHARAREH, SHAHNAM J	

ART UNIT	PAPER NUMBER
1617	

DATE MAILED: 08/27/2002 8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/656,364	Applicant(s) MARTINO ET AL.	
	Examiner Shahnam Sharareh	Art Unit 1617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *4/25/02, 6/6/02* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24,26,30 and 33-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24,26,30 and 33-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Amendments filed on April 25, 02 and June 06, 2002 have been entered. Claims 1-24, 26, 30, 33-38 are pending in this application.

Any rejection that is not addressed in this Office Action is considered obviated in view of the amendments and the presented arguments.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-24, 26, 30, 33-38 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "fairly, "highly," "fairly rapidly," and the limitation "rapidly precipitate out of the solution" in claim 1 and 35 are relative and render the claim indefinite. The term "fairly," "highly," and the limitations "rapidly precipitate out of the solution" are not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Moreover, such terms are not art recognized terms (see Remington, page 195, table 1). Thus, the metes and bounds of the claims are not clear.

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-7, 9-10, 12-13, 17-24, 26, 3-38 are rejected under 35 U.S.C. 102(b) as being anticipated by Akkerboom et al US Patent 5,211,958.

Applicant's arguments with respect to this prior art have been considered but are not found persusive. Applicant argues that Akkerboom's drugs do not fall within the instant requirement of suitable drugs which are fairly or highly soluble, because Akkerboom uses a different salt form.

In response, Examiner first states that the instant generic claims do not exclude the active agents set forth in Akkerboom, because "fairly soluble drugs," given its broadest reasonable interpretation, does not exclude the active agents used by Akkerboom. In fact, such term encompasses the relative nature of the active agents used by Akkerboom. Further, Applicant has not provided any evidence showing that the "low soluble drugs" of Akkerboom do not encompass "the instant fairly soluble drug."

Second, Applicants attention is drawn to the scope of the pending generic claims 1 and 35. Claim 1 recites ".. the rapidly precipitating drug is a fairly soluble or highly soluble salt form of a poorly soluble free base or anhydrous form of a poorly soluble fee base or free acid." Thus, the measurement of "fairly soluble or highly soluble of the claimed drug" is relative to their free base or anhydrous form of a poorly soluble free base or free acid. Akkerboom meets this limitation because his salts are more soluble than their respective free base or anhydrous form of the poorly soluble free base or free acid disclosed. In another word, the tetracycline trihydrate used by Akkerboom, is more soluble that its respective tetracycline free base or anhydrous form.

Moreover, Applicant's interpretation of col 3, lines 1-7 of Akkerboom is inaccurate. Akkerboom's "low solubility" is a characteristic relative to its drug taste, not its absolute solubility compared to its respective free base or anhydrous form. Thus, the comparison between Akkerboom's criteria of selecting an agent and the instant recited limitation is not parallel and thus inaccurate.

Further, the limitations of,

> "..wherein the rapid precipitating drug is a fairly soluble or highly soluble salt form of a poorly soluble free base or free acid or anhydrous form of a poorly soluble base or free acid.." in claim 1,
>
> and
>
> "...wherein the the rapidly precipitatin drug is apharamceutical compound, or its salt form, which when introduced in water, or simulated physiological fluids at body temperature, begins to dissolve farily rapidly and then begins to rapidly precipitate out of solution within 60 min to a less soluble form which provide a concentration that is less than therapetuci..." in claim 35,

are not only functional and inherent to the active agent, but also anticipated by the Akkerboom.

As the initial matter, examiner sets forth that the above-recited limitations are independent of salt form used, because they simply describe natural laws of solubility under the "Law of Mass Action" and "Le Chatelier's Principle." (see discussion in attached chapter 16 of Remingtons, page 194-198; Dictionary of Biochemistry and Molecualar Biology, 2nd ed. 1989, J. Stenesh pages 269-270). Accordingly to these principles, any time a salt formulation is placed in water, it disassociates into its ionic counterparts and its undissolved solid portion. In this case, it goes without saying that when a low soluble drug is placed in water, under the Law of Mass Action and the Le

Chatelier Principle, a salt of a low soluble drug such as tetracycline, first ionizes in the water and then crystallizes in the form of precipitation to naturally move the solution system in a state of equilibrium. Thus, the recited limitations are a function of any low soluble salt and its active agent when placed in water or physiologic medium.

Akkerboom discloses tablet compositions comprising a rapidly precipitating drug such as tetracycline or oxytetracycline or doxycycline, in combination with microcrystalline cellulose, Low substituted hyroxypropyl cellulose (the instant superdisintergrant), hydroxypropyl methylcellulose (HPMC), lactose, and colloidal silica (abstract; col 4, lines 34-45; col 2, lines 65-67; col 2, lines 36-57). The amounts of above ingredients falls with in the same range as the instantly claimed amounts (see examples 1, 3; col 5, lines 10-12). Akkerboom also discloses the use of other binding substances such as PVP (col 3, lines 29-30). Accordingly, Akkerboom meets the limitations of the instant claims.

Claim Rejections - 35 USC § 103

Claims 1-24, 26, 30, 33-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weintraub et al US Patent 4,013,785

Weintraub discloses a fast release tablet comprising a rapidly precipitating drug such as n-acetyl-paminophenol, microcrystalline cellulose, a binder, a flow agent such as colloidal silicon dioxides and a superdisintegrant such as sodium starch glycolate (see col 2, lines 1-35; col 4, lines 32-65; col 7 lines 34-67, col 8 lines 14-39, claim 1, 9, 13). Weintraub also teaches that various rapidly precipitating drug such as phenylproponaolamine or its hydrocholoride salt, phenylephrine or its hydrochloride salt,

propoxyphene, and diphenhydramine hydrochloride salts (Known as Benadryl) can be added to the final table compositions for their complementary effects (see col 2, lines 8-20). Examples 4 and 5 of Weintraub meet all the limitations of the instantly claimed composition, except that it lacks the instantly claimed rapidly precipitating drug, i.e. phenylproponaolamine hydrocholoride, phenylephrine hydrochloride, propoxyphene, and diphenhydramine hydrochloride.

Nevertheless, it would have been obvious to one of ordinary skill in the art at the time of invention to add such drugs as suggested by Weintraub to example 4 and 5 of Weintraub to complement the activity of APAP for their known intended use, because as taught by Weintraub, the ordinary skill in the art would have had a reasonable expectiaton of success in improving the therapeutic effects of APAP compositions of Example 4-5 of Weintraub.

Information Disclosure Statement

The information disclosure statement (IDS) filed January 25, 2002 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. In the instant case, copies of items AH-AR were not provided, neither was the Examiner able to locate them in the parent application. Applicant is requested to provide a copy of said references. Accordingly, at this time the IDS has been placed in the application file, but the information referred in items AH-AR have not been considered.

Conclusion

No claims are allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action, because the scope of the claims have been modified. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shahnam Sharareh, PharmD whose telephone number is 703-306-5400. The examiner can normally be reached on 8:30 am - 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's immediate supervisor, Russell Traverse can be reached on 703-308-4603. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-4556 for regular communications and 703-308-4556 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1123.

8/13/02

RUSSELL TRAVERS
PRIMARY EXAMINER
GROUP 1200